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FEDERAL AID IN FISH RESTORATION
2000 JOB PERFORMANCE REPORT
PROGRAM F-71-R-25

REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS
CLEARWATER REGION (Subprojects I-B, II-B, III-B)

PROJECT I.	SURVEYS AND INVENTORIES
Job a.	Clearwater Region Mountain Lakes Investigations
Job b.	Clearwater Region Lowland Lakes Investigations
Job c.	Clearwater Region Rivers and Streams Investigations
PROJECT II.	TECHNICAL GUIDANCE
PROJECT III.	HABITAT MANAGEMENT

By

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IDFG 01-29

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JOB PERFORMANCE REPORT

State of: Idaho

Program: Fisheries Management

Project I: Surveys and Inventories

Subproject I-B: Clearwater Region

Job: a

Title: Mountain Lakes Investigations

Contract Period: July 1, 2000 to June 30, 2001

Period Covered: January 1, 2000 to December 31, 2000

ABSTRACT

Twenty-one mountain lakes were surveyed in the Nez Perce National Forest during August-September 2000. The lakes were surveyed for biological factors including fish, amphibians, vegetation invertebrates, birds, and mammals. Physical and aspect data including depth, location, temperature, and substrate were also collected for each lake. This information will be compiled to aid in future management for these lakes.

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INTRODUCTION

The High Lakes Fisheries Project was initiated as a cooperative program of the U.S. Forest Service and Idaho Department of Fish and Game in 1986. The goal of the program is to develop baseline ecological data on high mountain lakes within the Clearwater River drainage in north central Idaho. During the period 1986 through 1999, 398 mountain lakes were surveyed in the Clearwater and Nez Perce National Forests (Bahls 1990, Bahls 1992, Cochnauer and Phillips 1994, Cochnauer and Murphy 1996, 1997, 1998, 1999 and 2000). Of these, 190 lakes are on the Nez Perce National Forest and 208 on the Clearwater National Forest.

In 2000, the project continued on the Nez Perce National Forest as a partnership between the Nez Perce National Forest, Idaho Department of Fish and Game (Figure 1). Funding for the project was provided by the Nez Perce National Forest and the Idaho Department of Fish and Game. This report presents the findings for 21 lakes surveyed in 2000. Lakes were located in the Selway River drainage.

OBJECTIVES

The objectives of the 2000 survey were to obtain, analyze, and summarize data to be used for:

1. Biological, physical, and chemical inventory of mountain lakes;
2. Long term monitoring;
3. Ecological effect of fish introductions; and
4. Development of fish management guidelines for individual lakes.

METHODS

The standardized high mountain lake survey methodology as described by Bahls (1991) was used to survey 21 mountain lakes located in the Selway River drainage from August to September 2000.

RESULTS AND DISCUSSION

The location description and proposed management direction based on information collected from each lake are presented in Table 1. Of the 21 lakes surveyed, four supported fish populations. Amphibians, spotted frogs, and long-toed salamanders populations were observed in nearly all the lakes surveyed. Detailed information on physical, biological and chemical data for lakes surveyed can be found in Cochnauer and Peterson (2001).

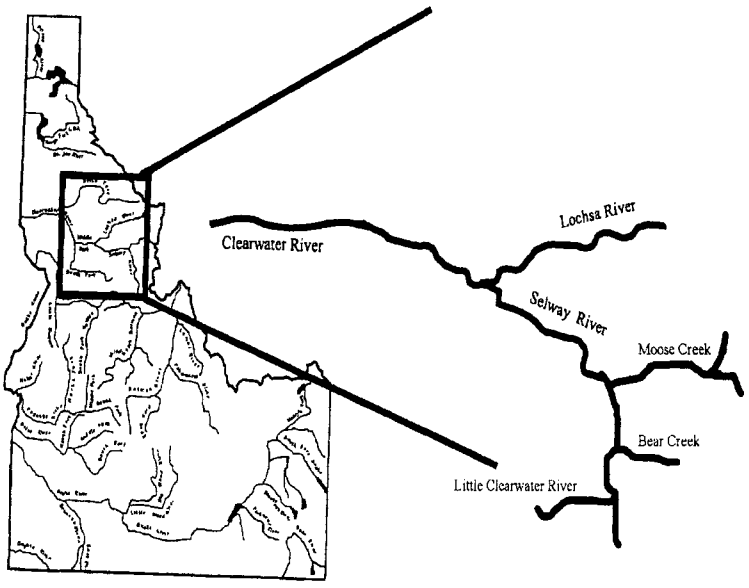

Figure 1. General location of the high mountain lakes surveyed in the Nez Perce National Forest, 2000.

Table 1. Location and proposed management direction for mountain lakes surveyed in the Nez Perce National Forest, 2000.

Lake Name	Township	Range	Section	FSY	Class	PSY	Stock	Int.
Burnt Knob Lake, Lower	27N	12E	4	1965	IVb	2001	CT-500	3
Burnt Knob Lake, Middle	27N	12E	4	1965	IVb	ND	ND	ND
Burnt Knob Lake, Upper	27N	12E	4	1965	IIb	2001	CT-500	3
Little Conquina Lake, Lower	32N	16E	19	ND	Ib	ND	ND	ND
Little Conquina Lake, Upper	32N	16E	19	ND	Ib	ND	ND	ND
Moe Peak Lake #1	32N	15E	27	ND	Ib	ND	ND	ND
Moe Peak Lake #2	32N	15E	27	ND	Ib	ND	ND	ND
Moe Peak Lake #3	32N	15E	27	ND	Ib	ND	ND	ND
Moe Peak Lake #4	32N	15E	23	ND	Ib	ND	ND	ND
Moe Peak Lake #5	32N	15E	26	ND	Ib	ND	ND	ND
Saddle Creek Lake	34N	16E	12	1951	IIb	ND	ND	ND
Spruce Creek Lake #1	32N	15E	24	ND	Ib	ND	ND	ND
Spruce Creek Lake #2	32N	16E	19	ND	Ib	ND	ND	ND
Spruce Creek Lake #2 Upper	32N	16E	19	ND	Ib	ND	ND	ND
Three Lake Creek Lake #1	33N	16E	7	ND	Ib	ND	ND	ND
Three Lake Creek Lake #2	33N	16E	7	ND	Ib	ND	ND	ND
Three Lake Creek Lake #3	33N	16E	7	ND	Ib	ND	ND	ND
Three Lake Creek Lake #4	33N	16E	7	ND	Ib	ND	ND	ND
Three Lake Creek Lake #5	33N	16E	7	ND	Ib	ND	ND	ND
Three Lake Creek Lake #6	33N	16E	7	ND	Ib	ND	ND	ND
Wahoo Lake	32N	15E	36	1967	IIa	ND	ND	ND

FSY-First year stocked
PSY-Proposed next stocking year
Int.-Proposed stocking interval Class:
- Ib-fishless lake with no past stocking records
- IIb-stocked lake with questionable survival
- IIa-natural reproduction at moderate or high level
- IVb-stockable lake
- V-further study needed to determine status of natural reproduction

ND – No data

Burnt Knob Lake, Lower

Lower Burnt Knob Lake (1.62 ha) is the largest of the three Burnt Knob lakes and is located to the north. The lake is relatively shallow with 65% of the surface area less than 3 m deep with a maximum depth of 5.98 m. This lake does support a small population of westslope cutthroat trout *Oncorhynchus clarki lewisi*. This lake also supports a large population of spotted frogs *Rana pretiosa* and a small population of long-toed salamanders *Ambysdstoma macrodactylum*. Annual stocking of 500 westslope cutthroat trout fry should be continued.

Burnt Knob Lake, Middle

Middle Burnt Knob Lake is the second largest of the three Burnt Knob lakes (1.48 ha) and is located furthest to the east. The lake is relatively shallow with 50% of the surface area less than 3 m deep and a maximum depth of 5.09 m. The lake supports a large population of naturally reproducing brook trout *Salvelinus fontinalis* and small population of westslope cutthroat trout that may have migrated from Upper Burnt Knob Lake. This lake supports only small populations of spotted frogs and long-toed salamanders. Fish stocking is not recommended in this lake because of the presence of brook trout.

Burnt Knob Lake, Upper

Upper Burnt Knob Lake (0.92 ha) is the smallest of the three Burnt Knob lakes and is located to the southwest. The lake is quite shallow with 60% of the surface being less than 3 m deep and a maximum depth of 5.58 m. The lake contains a small population of westslope cutthroat trout and a large population of spotted frogs and long-toed salamanders. Annual stocking of 500 westslope cutthroat trout fry should be continued.

Little Coquina Lake, Lower

Lower Little Coquina Lake is a small (<1.0 ha), shallow (100% <3 m), fishless lake that supports a large population of spotted frogs and a small population of long-toed salamanders. Fish stocking is not recommended in this lake because of its shallow nature.

Little Coquina Lake, Upper

Upper Little Coquina Lake is a small (<1.0 ha), seasonal mountain lake. Due the seasonal nature of this lake it does not support any fish or amphibian populations, and fish stocking is not recommended.

Moe Peak Lake #1

Moe Peak Lake #1 is the most western of the Moe Peak lakes. This lake is a small (<1.0 ha), moderately deep (50% <3 m) mountain lake that is fishless and supports a small population of spotted frogs and long-toed salamanders. Fish stocking is not recommended in this lake because of its small size.

Moe Peak Lake #2

Moe Peak Lake #2 is located between Moe Peak Lake #1 and #3. This lake is a small (<1.0 ha), shallow (100% <3 m), fishless mountain lake that supports a small population of spotted frogs and long-toed salamanders. Fish stocking is not recommended in this lake because of its shallow nature.

Moe Peak Lake #3

Moe Peak Lake #3 is located to the east of Moe Peak Lake #2. Moe Peak Lake #3 is a small (<1.0 ha) and shallow (100% <3 m) mountain lake that is fishless and supports a large population of spotted frogs. The lake also supports a small population of long-toed and Idaho giant salamanders. The lake was surrounded by a large meadow and the lake margins were marshy. Fish stocking is not recommended in this lake because of its shallow nature.

Moe Peak Lake #4

Moe Peak Lake #4 is a small and shallow mountain lake that is located northeast of Moe Peak Lake #5 and just south of Diamond Lake. Moe Peak Lake #4 is a small (<1.0 ha) and shallow (100% <3 m) mountain lake that is fishless and supports a large population of spotted frogs and long-toed salamanders. Fish stocking is not recommended in this lake because of its shallow nature.

Moe Peak Lake #5

Moe Peak Lake #5 is a small (<0.1 ha) and shallow (100% <3 m) mountain lake that is located southwest of Moe Peak Lake #4 and Diamond Lake. Moe Peak Lake #5 is fishless and supports a small population of spotted frogs and long-toed salamanders. Fish stocking is not recommended in this lake because of its shallow nature.

Saddle Creek Lake

Saddle Creek Lake is a small (1.01 ha) and deep (8.24 m maximum depth) mountain lake that is fishless and supports no amphibian population. The lake is located in a bowl of talus slopes with only scattered timber except for the ridge to the north of the lake that is covered with lodgepole and whitebark pine. Fish stocking is not recommended in this lake because of its small size and access difficulty.

Spruce Creek Lake #1

The Spruce Creek Lake #1 is the most western of the Spruce Creek lakes. It is a small (<1.0 ha), shallow (100% <3 m) and fishless mountain lake that supports a large population of spotted frogs and long-toed salamanders. Fish stocking is not recommended in this lake because of its shallow nature.

Spruce Creek Lake #2

Spruce Creek Lake #2 is a dry mountain lake that is fishless and supports no amphibian population. The inlets and outlets of this lake were dry at the time of the survey. This lake is located on the top of a large ridge and is within a small burn. Fish stocking is not recommended in this lake because of its seasonal nature.

Spruce Creek Lake #2, Upper

Upper Spruce Creek Lake #2 is a dry mountain lake that is fishless and supports no amphibian population. The inlets and outlets of this lake were dry at the time of the survey. This lake is located on the top of a large ridge and is within a small burn. Fish stocking is not recommended in this lake because of its seasonal nature.

Three Lake Creek Lake #1

Three Lake Creek Lake #1 is the largest of the six Three Lake Creek lakes and is the farthest south. The lake is a small (1.62 ha) mountain lake that is relatively shallow (80% <3 m), except for a deep hole in the southwest center of the lake. The lake is fishless and supports few amphibians including a small population of spotted frogs. Fish stocking is not recommended in this lake because of its shallow nature.

Three Lake Creek Lake #2

Three Lake Creek Lake #2 is a small (<1.0 ha), shallow (100% <3 m) lake and is the second largest of the Three Lake Creek lakes. It is the most eastern of the Three Lake Creek lakes. The lake is fishless and supports small populations of spotted frogs and long-toed salamanders. The outlets and inlets of this lake were dry at the time of the survey. Fish stocking is not recommended in this lake because of its seasonal nature.

Three Lake Creek Lake #3

Three Lake Creek Lake #3 is a small (<1.0 ha), shallow (100% <3 m) lake that is the third largest of the Three Lake Creek lakes. The lake is fishless and supports small populations of spotted frogs and long-toed salamanders. The inlets and outlets of this lake were dry at the time of the survey. Fish stocking is not recommended in this lake because of its seasonal nature.

Three Lake Creek Lake #4

Three Lake Creek Lake #4 is a small (<1.0 ha), shallow (100% <3 m) lake and is one of the three smaller lakes in this group of six. Three Lake Creek Lake #4 is located in the middle between the three larger lakes. The inlets and outlets are dry. The lake contains a small population of long-toed salamanders. Fish stocking is not recommended in this lake because of its shallow nature.

Three Lake Creek Lake #5

Three Lake Creek Lake #5 is a very small (<1.0 ha), shallow (100% <3 m) lake. It is one of the three smaller lakes in this group of six. Three Lake Creek Lake #5 is located to the northeast and appears to be little more than a large pool in the stream. The lake is fishless and contains a small population of spotted frogs and long-toed salamanders. Fish stocking is not recommended in this lake because of its shallow nature.

Three Lake Creek Lake #6

Three Lake Creek Lake #6 is small (<1.0 ha) and was dry at the time of the survey. It is one of the three smaller lakes in this group of six. The inlets and outlets are dry. Due to being dry, the lake was fishless and contained no amphibians. The lake's only inlet is the outlet of Three Lake Creek Lake #2. Fish stocking is not recommended in this lake because of its seasonal nature.

Wahoo Lake

Wahoo Lake is a medium sized (2.4 ha), relatively shallow (maximum depth 3.93 m) mountain lake that supports a small population of westslope cutthroat trout which may have some natural reproduction. The largest southern inlet of the lake has excellent spawning gravels and contained 11 smaller (65-115 mm) cutthroat. The lake also supports a large population of spotted frogs and a small population of long-toed salamanders. Fish stocking is not recommended in this lake because of existing natural reproduction.

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JOB PERFORMANCE REPORT

State of: Idaho

Program: Fisheries Management F-71-R-26

Project 1: Surveys and Inventories

Subproject 1-B: Clearwater Region

Job: b

Title: Lowland Lakes Investigations

Contract Period: July 1, 2000 to June 30, 2001

Period Covered: January 1, 2000 to December, 2000

ABSTRACT

No data is available for lowland lake investigations for this work period.

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JOB PERFORMANCE REPORT

State of: Idaho

Program: Fisheries Management

Project I: Surveys and Inventories

Subproject I-B: Clearwater Region

Job: c

Title: Rivers and Streams Investigations

Contract Period: July 1, 2000 to June 30, 2001

Period Covered: January 1, 2000 to December 31, 2000

ABSTRACT

Clearwater Region fishery management personnel snorkeled or coordinated data collection for 299 stream transects within the Clearwater, Salmon and Snake river drainages to obtain data for the long-term database. One hundred eleven adult chinook salmon (*Oncorhynchus tschawytscha)* redds were counted in traditional aerial spawning ground counts in the Lochsa and Selway rivers, and 198 were counted in the South Fork Clearwater drainage.

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OBJECTIVES

1. Develop long-term fish population database on selected streams throughout the Clearwater Region.
2. Monitor chinook salmon (*Oncorhynchus tschawytscha)* redd areas.
3. Monitor diet analysis of stocked rainbow trout (*Oncorhynchus mykiss*) in the lower Salmon and Clearwater rivers.

SALMONID POPULATION TREND MONITORING

Methods

We used standard snorkeling techniques to monitor fish densities at established monitoring sites in regional rivers and streams. Snorkeling was conducted when stream flows were low, clear and accessible. Small streams were snorkeled upstream with one to five observers depending on stream width. Larger streams and river corridors were snorkeled either upstream or free-floating downstream with the number of observers dependent on corridor width and water depth. Population abundance is presented as fish per 100 m^2.

Results

Selway River

A total of 39 chinook salmon juveniles were observed in three tributaries in the Selway River drainage. One bull trout *Salvelinus confluentus* was observed in O'Hara Creek (Table 1). Coho salmon *Oncorhynchus kisutch* parr were stocked in Meadow Creek, by the Nez Perce Tribe, but none were observed in the snorkeled transects. Fish densities (per 100 m^2) are shown in Table 1. We were unable to snorkel the majority of the usual transects in this drainage due to fire activity.

The Selway River drainage was stocked with 1,816 Rapid River and Dworshak stock adult chinook salmon by the Nez Perce Tribe in 2000. Aerial chinook salmon spawning ground counts on September 9 revealed 84 redds, 21 in tributaries and the rest in the mainstem (Table 2).

Lochsa River

Fish densities (per 100 m^2) as determined by snorkeling 15 transects in the Lochsa River drainage are shown in Table 2. A total of 28 suspected natural chinook salmon juveniles were observed in the tributaries surveyed, and 4 were seen in the mainstem. In addition, one suspected hatchery juvenile chinook salmon was observed in Warm Springs Creek. One bull trout was observed in White Sands Creek (Colt Killed Creek) (Table 3). Steelhead trout *O. mykiss gairdneri* were the most abundant fish

Table 1. Summary of fish densities (per 100 m^2) as determined by snorkeling the Selway River drainage, 2000.

Stream	Date	Section Area (m^2)	Steelhead trout					Cutthroat trout *O. clarki*		Chinook	Mountain whitefish	Bull
			Total	Age 0	Age 1	Age 2	Age>2	Total	<305 mm	>305 mm	Salmon (age 0)	*Prosopium williamsoni*	trout
Gedney Creek, GPM #1	7/31	343.3	16.01	10.48	3.20	2.33	0	0	0	0	0.87	1.16	0
Gedney Creek, GPM #2	7/31	412.0	17.71	9.70	4.85	3.16	0	0	0	0	0	0.24	0
Meadow Creek # 1 Slims Camp	8/10	1776.9	3.96	2.05	0.64	1.13	0.14	0.07	0.07	0	0.17	1.06	0
Meadow Creek # 2	8/11	1364.2	2.71	1.47	0.51	0.66	0.07	0.07	0.07	0	0.51	0.15	0
O'Hara Creek #1, meadow	8/10	855.7	7.68	4.07	2.79	0.7	0.12	0	0	0	2.80	0	0
O'Hara Creek #2, canyon	8/10	265.4	7.91	2.26	3.77	1.88	0	0	0	0	1.51	0	0.38

Table 2. Chinook spawning ground survey summary Clearwater River drainage, Selway River, 2000.

Drainage	Reach	Type	Description	Date	Method	Fish		
						Redds	Live	Dead
White Cap Cr.	WC-1	T	Mouth to Coopers Flat	9/9	Aerial	8	4	0
		ISS&C	Coopers Flat to Barrier	9/9	Aerial	0	0	0
Bear Cr.	WC-2	T	Mouth to Cub Cr.	9/9	Aerial	13	22	0
Moose Cr.	WC-3	T	Mouth to Cedar Cr.	9/9	Aerial	0	0	0
Running Cr.	WC-4	T	Mouth to two miles above Eagle Creek and lower one mile of Eagle Cr.	9/9	Aerial	0	0	0
Selway	WC-5	T	Thompson Flat to Magruder RS	9/9	Aerial	4	4	1
Selway	WC-6	T	Magruder RS to Magruder Crossing	9/9	Aerial	5	1	0
Selway	WC-7	T	Magruder Crossing to Little Clearwater River	ND	Ground	(not done, fires prevented access)		
				9/9	Aerial	46	14	1
Selway	WC-8	T	Little Clearwater R. to White Cap Cr	9/9	Aerial	6	3	0
Selway	WC-9	T	White Cap Cr. to Bear Cr.	9/9	Aerial	2	1	0
			Selway Drainage Ground Count Total			0	0	0
			Selway Drainage Aerial Count Total			84	49	2

Visibility generally good. Flights one week later than usual. Surveys done in a Hughes 500C, which has less viewing visibility than the Hiller used in previous years.

Table 3. Summary of fish densities (per 100 m^2) as determined by snorkeling in the Lochsa River drainage, 2000.

Stream	Date	Section Area (m^2)	Steelhead trout					Cutthroat trout			Chinook (Age 0)	Mountain whitefish	Bull trout
			Total	Age 0	Age 1	Age 2	Age >2	Total	<305 mm	>305 mm			
Colt Creek	8/3	249.2	0	0	0	0	0	6.8	6.8	0	0	0	0
Crooked Fork Creek #1B	8/3	1606.0	7.73	7.04	0.5	0.19	0	0.24	0.12	0.12	1.12	0.68	0
Fire Creek #1, lower	8/11	488.9	9.82	2.05	5.93	1.64	0.2	0.2	0.2	0	0	0	0
Fire Creek #2, upper	8/11	389.0	8.23	4.11	3.09	1.03	0	0	0	0	0	0	0
Lochsa River #4, at Papoose Creek	8/2	5766.7	0.04	0.02	0	0.02	0	0.1	0.02	0.08	0	0	0
Lochsa River #3, at Warm Springs Creek	8/2	6209.6	1.0	0	0.02	0.08	0	0.51	0.39	0.12	0	1.71	0
Lochsa River #1, at Fish Creek	8/2	4672.9	0.38	0.26	0.06	0.06	0	0.18	0.09	0.09	0.09	0.71	0
Lochsa River #2, at Pete King Creek	8/2	17671.3	0	0	0	0	0	0.03	0.01	0.02	0	1.28	0
Old Man Creek	8/12	499.0	15.42	4.81	7.41	3.2	0	2.6	1.4	1.2	0	0.6	0
Post Office Creek #1, lower	8/13	296.1	18.24	12.5	4.73	1.01	0	0.34	0.34	0	0	0	0
Post Office Creek #2, upper	8/15	202.4	13.34	8.4	4.94	0	0	0.99	0.99	0	0	0	0
Split Creek #1, lower	8/11	567.2	11.34	7.09	2.66	1.59	0	0.53	0.53	0	0	0	0
Split Creek #2, upper	8/11	421.8	12.46	6.58	3.29	2.35	0.24	0.71	0.71	0	0	0.24	0
Warm Springs Creek	8/15	946.1	0.64	0.21	0.32	0.11	0	2.22	1.06	1.16	0.32	0	0
White Sands Creek	8/3	3360.0	3.04	2.38	0.42	0.21	0.03	0.98	0.92	0.06	0.12	0.09	0.03

species observed in the Lochsa River drainage surveys. Brushy Fork Creek, Hopeful Creek and portions of Crooked Fork Creek were not snorkeled due to fire activity.

In August, the Nez Perce Tribe planted 100 adult chinook salmon in White Sands Creek. The fish originated from the Clearwater Hatchery.

Chinook salmon aerial spawning ground counts revealed 24 redds in Crooked Fork, 24 in Brushy Fork, two in Colt Killed Creek, and five in Storm Creek (Table 4). Ground counts found 52 redds in Crooked Fork Creek and six redds in Brushy Fork Creek.

Snake River

Only two suspected hatchery chinook salmon juveniles were observed while employees snorkeled two Snake River tributaries (Table 5). Juvenile steelhead were most abundant in these transects. No bull trout were observed.

Salmon River

Ten tributaries of the lower Salmon River were surveyed by snorkeling in 2000 (Table 6). Juvenile steelhead were the most abundant fish observed in these tributaries. A total of 40 juvenile chinook salmon were found in John Day, Crooked, Sheep, Slate, Skookumchuck and Whitebird creeks. Bull trout were observed in Big Mallard Creek (1), Slate Creek (2), Bargamin Creek (4) and Sheep Creek (1).

North Fork Clearwater River

Fisheries management personnel snorkeled eight streams in this drainage. Cutthroat trout were the most abundant fish observed (Table 7). Brook trout *Salvelinus fontinalis* were found in Orogrande Creek. Rainbow trout were found in French Creek. Kokanee salmon *O. nerka kennerlyi* were found in Lower Weitas Creek and Little Moose Creek.

Lower Clearwater River

Mission Creek and the East Fork Potlatch River were the two tributaries snorkeled in the drainage. Steelhead trout were the most abundant species observed (Table 8). Thirty-seven brook trout were observed in the three transects of the East Fork Potlatch River. Juvenile coho salmon were also observed in the East Fork Potlatch River. In March, the Nez Perce Tribe planted 267,000 coho salmon smolt in the Potlatch River, and 15,000 coho salmon fry were planted in Mission Creek in June.

Table 4. Chinook spawning ground survey summary Clearwater River drainage, Lochsa River, 2000.

Drainage	Reach	Type	Description	Date	Method	Redds	Fish Live	Fish Dead
Crooked Fk.	NC-9	NT	Mouth to Hopeful Cr.	9/11	Aerial	8	3	1
	NC-10	T	Rock Cr. to cliff hole	9/3	Ground	52	7	ND
				9/11	Aerial	16	1	0
Brushy Fk.	NC-11	T	Low Gap Br to one mile downstream	9/2	Ground	6	5	ND
				9/11	Aerial	19	2	0
	NC-12	C	Mouth to Spruce Cr.	9/11	Aerial	5	2	0
Colt Killed Cr (White Sands Cr)	NC-13	NT	Mouth to Big Flat Cr.	9/11	Aerial	2	1	0
Big Sand Cr		ISS	Mouth to Hidden Cr (barrier falls)	9/11	Aerial	0	0	0
Storm Cr		ISS	Mouth to North Fork (6-7 miles upstream)	9/11	Aerial	5	0	0
			Lochsa Drainage Ground Count Total			58	12	3
			Lochsa Drainage Aerial Count Total			55	9	1

Aerial surveys: Visibility poor for Crooked Fk Cr. Visibility marginal for Brushy Fk Cr. Visibility good for all the other aerial surveys. Surveys done in a Hughes 500C, which has less viewing visibility than the Hiller used in previous years. Flights one week later than usual.

Table 5. Summary of fish densities (per 100 m^2) as determined by snorkeling in the Snake River drainage, 2000.

Stream	Date	Section Area (m^2)	Steelhead trout					Cutthroat trout			Chinook salmon (age 0)	Mountain whitefish	Bull trout
			Total	Age 0	Age 1	Age 2	Age >2	Hatchery	Total	<305 mm	>305 mm			
Granite Creek #1, lower	8/15	469.8	13.2	6.17	2.77	3.62	0.64	0	0	0	0	0	0	0
Granite Creek #3, upper	8/15	219.6	18.22	2.73	8.2	5.01	2.28	0.91	0.46	0.46	0	0	0	0
Sheep Creek #1, lower	8/16	250.8	44.26	3.99	25.92	12.36	1.99	1.99	0.4	0.4	0	0	0	0
Sheep Creek #2, upper	8/16	235.3	40.8	3.4	30.17	5.95	0	0	0	0	0	0	0	0

Table 6. Summary of fish densities (per 100 m^2) as determined by snorkeling in the Salmon River drainage, 2000.

Stream	Date	Section Area (m^2)	Steelhead trout					Cutthroat trout			Chinook salmon (age 0)	Mountain whitefish	Bull trout	Brook trout
			Total	Age 0	Age 1	Age 2	Age >2	Total	<305 mm	>305 mm				
Bargamin Creek #1, lower	7/20	954.8	10.67	5.13	2.72	2.51	0.31	0.52	0.52	0	0	0.73	0.42	0
Bargamin Creek #2, upper	7/20	767.3	8.61	2.09	3.26	3.0	0.26	0	0	0	0	0.91	0	0
Big Mallard Creek #1, lower	7/21	343.6	16.01	7.86	4.66	2.91	0.58	0.58	0.58	0	0	0.58	0	0
Big Mallard Creek #2, upper	7/21	434.3	14.05	8.29	5.07	0.46	0.23	1.15	1.15	0	0	0	0.23	0
Crooked Creek #1 lower	7/21	882.0	7.14	2.49	1.93	2.38	0.34	0.11	0.11	0	0	1.25	0	0
Crooked Creek #2 upper	7/21	949.0	12.75	7.59	3.37	1.79	0	0.21	0.21	0	0.32	0.32	0	0
Jersey Creek	7/21	202.5	10.86	3.46	2.96	4.44	0	0.49	0.49	0	0	0	0	0
John Day Creek #1, lower	7/22	142.7	23.13	10.51	5.61	7.01	0	0	0	0	1.4	0	0	0
John Day Creek #2, upper	7/22	183.5	2.72	0	1.63	1.09	0	0	0	0	0	0	0	0
Race Creek	7/22	924.0	5.95	3.57	2.06	0.32	0	0	0	0	0	0	0	0
Sheep Creek #1, lower	7/20	808.9	14.33	10.38	2.1	1.36	0.49	0.12	0.12	0	0	0.99	0.25	0
Sheep Creek #2, upper	7/20	695.0	10.93	4.17	2.73	3.17	0.86	0.43	0.43	0	0.14	1.01	0	0
Skookumchuck Creek #1, lower	7/22	802.6	11.20	7.35	3.61	0.12	0.12	0	0	0	0.12	0	0	0
Skookumchuck Creek #2, upper	7/22	0	0	0	0	0	0	0	0	0	0	0	0	0
Slate Creek # 1	7/19	547.8	10.4	3.1	4.56	2.19	0.55	0.91	0.91	0	0	0.18	0.37	0
Slate Creek # 2	7/19	716.0	5.17	2.09	1.96	1.12	0	0.84	0.84	0	0.28	0.14	0	0.14
Slate Creek # 3	7/19	357.0	11.2	7.84	1.12	1.96	0.28	3.64	3.64	0	0	0.28	0	0
Slate Creek # 4	7/19	231.3	6.06	1.30	1.73	3.03	0	4.76	4.76	0	0	0.86	0	0
Slate Creek # 5	7/19	371.7	9.68	3.23	4.57	1.88	0	0	0	0	0.81	0.27	0	0
Slate Creek #6	7/19	454.9	3.74	0.22	1.98	1.54	0	0.22	0.22	0	0	1.10	0	0.22
Slate Creek # 7 (Little Slate Cr.)	7/19	239.1	7.11	0.84	4.60	1.67	0	0.84	0.84	0	3.76	0	0	0.42
S.F. White Bird Creek #2	7/22	253.8	33.88	15.76	13.40	4.33	0.39	0	0	0	0	0	0	0
S.F. White Bird Creek #3	7/22	162.4	36.34	13.55	17.86	4.93	0	0	0	0	0	0	0	0
White Bird Creek #1	7/22	220.0	94.54	44.55	30.45	19.09	0.45	0	0	0	0	0	0	0

Table 7. Summary of fish densities (per 100 m^2) as determined by snorkeling in the North Fork Clearwater River drainage, 2000.

				Steelhead trout					Cutthroat trout		Kokanee	Mountain	Bull	Brook
Stream	Date	Section Area (m^2)	Total	Age 0	Age 1	Age 2	Age >2	Total	<305 mm	>305 mm	salmon	whitefish	trout	trout
Ruby Creek #1	8/20	525	0	0	0	0	0	7.50	7.50	0	0	0	0	0
Little Moose Creek #1	8/20	620	0	0	0	0	0	2.58	1.64	0.94	0	0	0	0
Little Moose Creek #2	8/20	136	0	0	0	0	0	5.90	5.90	0	0.74	0	0	0
Little Moose Creek #3	8/20	93	0	0	0	0	0	10.80	6.46	4.31	0	0	0	0
Beaver Creek #1	8/20	175	0	0	0	0	0	6.84	6.27	0.57	0	0	0	0
Beaver Creek #2	8/20	237	0	0	0	0	0	2.53	2.53	0	0	0	0	0
Isabella Creek #1	8/21	159	0	0	0	0	0	6.90	6.90	0	0	0	0	0
Isabella Creek #2	8/21	1267	0	0	0	0	0	8.68	8.68	0	0	0	0	0
Isabella Creek #3	8/21	251	0	0	0	0	0	4.79	4.39	0.40	0	0	0	0
Quartz Creek #1	8/21	151	0	0	0	0	0	5.97	5.97	0	0	0	0	0
Quartz Creek #2	8/21	180	0	0	0	0	0	2.22	2.22	0	0	0	0	0
Orogrande Creek #1	8/21	118	0	0	0	0	0	2.55	2.55	0	0	0	0	0
Orogrande Creek #2	8/21	322	0	0	0	0	0	1.24	1.24	0	0	0	0	3.11
Orogrande Creek #3	8/21	722	0	0	0	0	0	2.77	2.77	0	0	0	0	0
French Creek #1	8/22	270	0	0	0	0	0	0.74	0.74	0	0	0	0	0
French Creek #2	8/22	184	0	0	0	0	0	1.63	1.63	0	0	0	0	0
French Creek #3	8/22	161	0.62	0	0	0.62	0	0.62	0.62	0	0	0	0	0
Lower Weitas Creek	8/31	807	0	0	0	0	0	1.61	0	1.61	0.87	4.22	0	0

Table 8. Summary of fish densities (per 100 m^2) as determined by snorkeling in the Lower Clearwater River drainage, 2000.

Stream	Date	Section Area (m^2)	Steelhead trout					Cutthroat trout			Bull trout	Mountain whitefish	Brook trout	Coho salmon
			Total	Age 0	Age 1	Age 2	Age >2	Total	<305 mm	>305 mm				
E.F. Potlatch River #1, lower	8/17	190.6	9.45	4.20	3.15	2.10	0	0	0	0	0	0	12.07	0.52
E.F. Potlatch River #2, middle	8/17	165.2	29.7	23.0	6.10	0.6	0.13	0	0	0	0	0	4.2	0
E.F. Potlatch River #3, upper	8/17	97.9	43.9	33.7	10.21	0	0	0	0	0	0	0	7.2	0
Mission Creek,#1	6/29	335.5	14.01	12.82	1.19	0	0	0	0	0	0	0	0	0
Mission Creek #2	6/29	228.6	17.93	11.37	5.69	0.87	0	0	0	0	0	0	0	0

Table 9. Summary of fish densities (per 100 m^2) as determined by snorkeling in the East Fork Potlatch River, Potlatch Corporation ownership.

Stream	Date	Section Area (m^2)	Steelhead trout					Cutthroat trout			Bull trout	Mountain whitefish	Brook trout	Coho salmon
			Total	Age 0	Age 1	Age 2	Age >2	Total	<305 mm	>305 mm				
Site #4	8/18	139.4	30.13	19.37	10.04	0	0	0	0	0	0	0	2.15	0
Site #5	8/18	64.0	50.01	40.63	9.38	0	0	0	0	0	0	0	18.75	0
Site #6	8/17	129.8	27.74	18.49	8.48	0.77	0	0	0	0	0	0	0	0
Site #7	8/18	109.3	19.21	13.72	5.49	0	0	0	0	0	0	0	9.15	0
Site #8	8/17	121.5	55.14	42.80	11.52	0.82	0	0	0	0	0	0	5.76	0
Site #9	8/17	123.8	31.52	19.39	10.51	1.62	0	0	0	0	0	0	0.81	0

We also snorkeled six sites on the East Fork Potlatch River on Potlatch Corporation ownership. Steelhead trout were the most abundant species in these sites. Brook trout and coho salmon were also observed. (Table 9).

South Fork Clearwater River

A total of 663 suspected wild chinook salmon juveniles were observed while snorkeling in 63 traditional transects on six streams in the South Fork Clearwater River drainage (Table 10). Bull trout were observed in Crooked River, American River, Moore Creek, Ten Mile Creek, and Johns Creek. Mountain whitefish and steelhead trout were the most abundant species observed in these streams (Table 10). The Nez Perce Tribe planted a total of 425 adult chinook salmon and 186,250 pre-smolt chinook salmon into the South Fork Clearwater River drainage in late summer and fall of 2000. Coho salmon parr reared at the Dworshak Hatchery were also planted in this drainage, and were observed while snorkeling.

Additional transects were snorkeled in the mainstem of the South Fork Clearwater River as part of Idaho Supplementation Studies (ISS). All of the mainstem of the South Fork Clearwater River is accessible by Highway 13/14. Creeks, campgrounds, and other landmarks are listed in Table 11. Harpster, ID is at river km 21, and the most downstream boundary of the Nez Perce National Forest is at river km 24.2. Fish densities (per 100 m^2) as determined by snorkeling are found in Tables 12 and 13. The mainstem of the South Fork Clearwater River, which is approximately 103 km, was divided into 1 km segments. Within these segments transects were randomly chosen with lengths (in meters) determined by habitat breaks. Twenty-one of these transects were snorkeled twice in this season, once in June or July and the second time in August.

All salmonid species observed were counted and recorded by 1-inch size groups. A total of 539 juvenile chinook salmon were observed. In addition, twenty bull trout, 1,889 mountain whitefish, and eighty cutthroat trout were observed. (Table 12) Nongame fish were identified to species and quantified. Population density was also calculated for nongame species as fish per 100 m^2 (Table 13).

A total of 311 chinook salmon redds were counted in aerial surveys in the South Fork Clearwater drainage. Chinook salmon redd ground counts revealed 458 additional redd. (Table 14).

Table 10. Summary of fish densities (per 100 m^2) as determined by snorkeling parr monitoring sites in the South Fork Clearwater River drainage, 2000.

Stream	Date	Section Area (m^2)	Steelhead trout					Cutthroat trout			Chinook	Mountain	Bull	Brook
			Total	Age 0	Age 1	Age 2	Age >2	Total	<305 mm	>305 mm	salmon	whitefish	trout	trout
American River, Strata 1, gravel pit	7/7	164.2	2.44	0	1.83	0	0.61	0	0	0	10.35	18.27	0	0
American River, Strata 1, 0.75 km	7/7	249.6	0	0	0	0	0	0	0	0	0	0	0	0
American River, Strata 1, 1.25 km	7/7	291.4	0.69	0	0.69	0	0	0.69	0.69	0	0	16.13	0	0
American River, Strata 1, 1.75 km	7/7	187.4	2.13	0	0	2.13	0	2.67	2.67	0	0	0	0	0
American River, Strata 1, 2.25 km	7/7	226.3	0	0	0	0	0	0	0	0	0	2.65	0	0
American River, Strata 1, 2.65 km	7/7	232.7	0	0	0	0	0	0	0	0	0	1.72	0	3.01
American River, Strata 2, section 1	7/7	312.6	1.28	0	1.28	0	0	0	0	0	0	0.32	0	0
American River, Strata 2, Flat Iron Ridge	7/6	301.9	7.28	0.66	6.29	0.33	0	0	0	0	0.66	0.99	0	0
American River, Strata 2, above cattle guard	7/6	323.9	4.01	0	4.01	0	0	0.31	0.31	0	0	0.31	0	0
American River, Strata 2, Stairway to Heaven	7/6	480.0	10.21	0.42	9.79	0	0	0.63	0.63	0	3.33	3.96	0	0.21
American River, Strata 2, 1/8 mi above E.Fork	7/6	169.1	4.14	0	4.14	0	0	0	0	0	0.59	0	0	1.18
American River, Strata 2, Guntley's	7/6	188.1	1.59	0	1.59	0	0	0	0	0	0	0	0	0
American River, Strata 2, Cross River Lower	7/6	409.0	1.22	0	1.22	0	0	0	0	0	0.73	7.82	0	0
American River, Strata 2, Lower gravel pile	7/7	355.7	0.56	0	0.56	0	0	0.28	0.28	0	0	1.97	0.28	0
American River, Strata 2, B/W Bound & Stump Lane	7/7	196.8	1.52	0	1.52	0	0	0	0	0	0	0.51	0	0
American River, Strata 2, Cross River Upper	7/7	200.6	0.50	0	0.50	0	0	0.5	0.5	0	0	1.50	0	0
American River, Strata 3, Section 2	7/6	941.9	5.20	0	3.29	0.85	1.06	0.11	0	0.11	0.81	0.32	0	0
American River, Strata 3, Buffalo Pit	7/6	675.8	1.78	0	0.74	0.30	0.74	0.15	0.15	0	0	1.04	0	0
American River, Strata 3, Stock sign	7/6	526.0	0.57	0.38	0.19	0	0	0	0	0	0.19	0	0	0
American River, Strata 3, Stop sign	7/6	541.8	4.24	0	3.32	0.74	0.18	0	0	0	0	0.37	0	0
American River, Strata 3, Kirk's Fork	7/6	307.0	8.47	0	8.14	0.33	0	0	0	0	0.65	14.01	0.65	0.98
American River, Strata 3, 0.5 below Box Sing	7/6	414.0	6.76	0	5.56	0.72	0.48	0	0	0	0	3.38	0	0
Johns Creek #1	7/19	360.6	10.28	1.12	8.04	1.12	0	0	0	0	2.22	0.55	0	0
Johns Creek #2	7/19	681.0	10.57	5.43	4.55	0.59	0	0	0	0	0.88	0.73	0	0
Johns Creek #3	7/19	1535.6	1.90	0.33	1.24	0.33	0	0.85	0.85	0	0	0	0.39	0
Johns Creek #4	7/19	193.7	9.81	052	6.71	2.58	0	1.03	1.03	0	0	0	0	0
Moore Creek #1, lower	8/7	173.5	12.12	9.22	2.90	0	0	21.90	21.90	0	0	0	8.07	0
Moore Creek #2, upper	8/7	216.2	3.71	0.93	2.78	0	0	6.01	6.01	0	0	0	0.93	0
Ten Mile Creek #1, lower	7/23	633.5	4.67	0.30	2.86	1.51	0	0.15	0.15	0	0	0.30	0.15	0
Ten Mile Creek #2, upper	7/23	642.8	4.97	0.62	3.11	1.24	0	0.47	0.47	0	0	0.47	0.16	0

Table 10. Continued.

Stream	Date	Section Area (m^2)	Steelhead trout					Cutthroat trout			Chinook salmon (age 0)	Mountain whitefish	Bull trout	Brook trout
			Total	Age 0	Age 1	Age 2	Age >2	Total	<305 mm	>305 mm				
Red River, Strata 1, control 1	7/7	558.8	0	0	0	0	0	0	0	0	0.18	2.68	0	7.87
Red River, Strata 1, control 2	7/7	407.0	1.24	0.74	0.25	0.25	0	0.25	0.25	0	0.74	0.74	0	9.09
Red River, Strata 1, CSUP 1	7/7	620.5	0	0	0	0	0	1.61	1.61	0	0.32	6.45	0	9.99
Red River, Strata 1, Goosebox	7/7	186.2	0	0	0	0	0	1.07	1.07	0	0	1.07	0	13.96
Red River, Strata 1, Upper Shissler	7/7	98.6	0	0	0	0	0	11.16	11.16	0	0	0	0	6.09
Red River, Strata 2, control 2	7/7	836.4	0	0	0	0	0	0.36	0.36	0	0	0.12	0	0.12
Red River, Strata 2, treat 2	7/7	1201.5	0.41	0.33	0	0	0.08	0.83	0.83	0	0	0.42	0	0
Red River, Strata 2, CSUP 3	7/7	331.7	0.6	0	0	0.6	0	0	0	0	0.6	0.6	0	0.3
Red River, Strata 2, CSUP 6	7/7	383.6	0.52	0.26	0.26	0	0	1.56	1.56	0	0	0.26	0	0.26
Red River, Strata 2, 1st NF rec site, ¼ mi. sign	7/7	389.5	0.26	0.26	0	0	0	1.80	1.54	0.26	0	0.51	0	0.51
Red River, Strata 3, old bridge	7/7	836.7	1.56	0	0.48	1.08	0	0.12	0.12	0	0	1.91	0	0.24
Red River, Strata 3, 1150	7/6	643.1	2.03	0	0.16	1.40	0.47	0	0	0	0.47	3.89	0	0.78
Red River, Strata 3, BLW weir	7/6	519.8	5.77	0	2.89	2.69	0.19	0.96	0.38	0.58	0.19	2.12	0	0.38
Red River, Strata 4, control 2	7/6	3323.4	0.24	0.03	0.09	0.09	0.03	0	0	0	0.69	0.27	0	0.06
Red River, Strata 4, treat 2	7/6	2991.4	0.06	0.03	0	0.03	0	0	0	0	0.20	0.23	0	0
Red River, Strata 4, log island	7/6	540.87	1.66	0	0.74	0.92	0	0	0	0	1.85	0.74	0	0.18
Red River, Strata 4, BLDR-pool	7/6	670.5	1.50	0	0.45	0.75	0.30	0	0	0	0	4.18	0	0.15
Red River, Strata 5, control 2	7/8	820.0	0.37	0	0	0.37	0	0	0	0	0	2.80	0	0
Red River, Strata 5, treat 2	7/8	856.4	0.93	0	0	0.70	0.23	0	0	0	0	0.93	0	0
Red River, Strata 5, Johnson down	7/8	1387.0	0	0	0	0	0	0.14	0.14	0	0	5.34	0	0
Red River, Strata 5, Johnson up	7/8	711.0	0	0	0	0	0	0	0	0	0	8.3	0	0.14
Red River, Strata 5, Gibler 1	7/8	1441.0	0	0	0	0	0	0.14	0.14	0.14	0.14	5.55	0	0
Red River, Strata 5, Gibler 3	7/8	999.0	2.0	0	0.70	1.0	0.30	0.10	0.10	1.50	1.90	1.0	0	1.0
Red River, Strata 5, LP1	7/9	499.7	0.40	0	0	0	0.40	0	0	0	0.20	7.0	0	0.20
Red River, Strata 5, LP2	7/9	887.0	0.11	0	0.11	0	0	0	0	.23	0.23	5.07	0	0.11
Red River ,Strata 5, LP3	7/9	192.1	0.52	0	0.52	0	0	0	0	0	0	3.64	0	0.52
Red River ,Strata 5, LP4	7/9	1780.2	0	0	0	0	0	0	0	0	0.06	4.72	0	0.06
Red River ,Strata 6, CSUP 6 (30 m)	7/5	798.1	7.52	0.13	1.25	5.01	1.13	0	0	0.25	0.38	0.38	0	0
Red River ,Strata 6, CSUP 5 (31 m)	7/5	862.4	2.55	0	2.32	0.23	0	0	0	0.23	0.23	0.46	0	0.35
Red River ,Strata 6, CSUP 4	7/5	629.1	3.50	0.32	0.48	1.59	1.11	0	0	0	0	2.23	0	0
Red River ,Strata 6, CSUP 3	7/5	815.8	0	0	0	0	0	0	0	0	0	0	0	0
Red River ,Strata 6, CSUP 2	7/5	339.7	2.65	0	0.59	0.88	1.18	0	0	0	1.18	3.83	0	0
Red River ,Strata 6, CSUP 1	7/6	622.0	0.16	0.16	0	0	0	0	0	0	0	0	0	0

Table 10. Continued.

Stream	Date	Section Area (m^2)	Total	Steelhead trout				Cutthroat trout			Chinook Salmon (age 0)	Mountain whitefish	Bull trout	Brook trout
				Age 0	Age 1	Age 2	Age >2	Total	<305 mm	>305 mm				
Crooked River														
Strata 1, Sill Log B	7/9	459.5	1.97	0	1.31	0.44	0.22	0.22	0.22	0	0	1.31	0	0
Strata 1, Control B	7/9	689.1	0.88	0	0.44	0.44	0	0.15	0.15	0	0	1.16	0.58	0
Strata 2, Control 1	7/9	800.7	0.86	0	0.12	0.62	0.12	0.12	0.12	0	0	2.25	0	0
Strata 2, Control 2	7/9	1166.3	0.18	0	0.09	0.09	0	0	0	0	0	0.43	0	0
Strata 2, Treat 2	7/9	934.3	1.93	0	0.43	1.18	0.32	0	0	0	0.11	1.93	0	0
Strata 3, Natural 1	7/8	1020.2	1.27	0.10	0.78	0.29	0.10	2.06	2.06	0	0	4.41	0	2.74
Strata 3, Natural 3	7/7	565.5	10.26	4.78	4.07	0.35	1.06	0.18	0.18	0	0.71	3.01	0	0
Strata 4, B-Ponds S-2	7/8	494.1	0.2	0.2	0	0	0	0.2	0.2	0	0	19.43	0	2.02
Strata 4, Meander 1	7/8	525.1	1.9	0	1.14	0.38	0.38	1.14	1.14	0	1.14	10.28	0	4.38
Strata C, Canyon 2	7/9	632.4	4.43	0	0.95	2.21	1.27	0	0	0	0.16	1.58	0.16	0
Strata C, Canyon 3	7/9	1965.6	4.24	0.71	2.35	1.18	0	0	0	0	0	0.47	0.24	0
Orogrande 1	7/10	349.6	0.73	0	0.49	0.24	0	2.42	2.18	0.24	0	0.49	1.21	0
West Fork, WF1	7/9	307.1	2.28	0	1.30	0.98	0	5.86	5.86	0	0	0	0	0
West Fork, WF2	7/9	320.2	0.31	0	0.31	0	0	1.25	1.25	0	0	0.31	0.62	0
East Fork, EF1	7/10	652.8	0.30	0	0.15	0.15	0	1.53	1.53	0	0	0	0.31	0
East Fork, EF2	7/10	322.7	2.17	2.17	0	0	0	3.10	3.10	0	0.31	0.31	0.93	0
Five Mile Creek, Strata 1, 1-B	7/10	148.8	0	0	0	0	0	8.06	8.06	0	0	0	0	0
Relief Creek, Strata 1, 1-A	7/8	250.8	0.40	0	0.40	0	0	1.20	1.20	0	0	0	0	0
Relief Creek, Strata 2, 2-A	7/8	201.5	1.99	0	1.99	0	0	5.96	5.96	0	0	0	0	0
Strata H, at confluence of E.F. and WF2	7/9		0.54	0	0.36	0.18	0	1.26	1.26	0	0	0	0.54	0

Table 11. Landmarks for snorkel transects on the mainstem of the South Fork Clearwater River, 2000.

Mouth to....	Km	Right or left side going up stream	Km from mouth of SF Clearwater
Stites	6.3	L	6.3
Rabbit Creek	2.7	L	9.0
Three Mile Creek	2.9	R	11.9
Sally Ann Creek	6.1	L	18.0
Butcher Creek	0.6	L	18.6
Harpster	2.2	L	20.8
Green Creek	3.4	L	24.2
Lightning Creek	1.5	L	25.7
Mill Creek	4.8	R	30.5
Schwartz Creek	3.2	L	33.7
Farrens Creek	5.0	R	38.7
Cotter Campground	1.3	L	40.0
Earthquake Creek	4.3	L	44.3
Castle Creek	4.7	L	49.0
South Fork Station	2.2	L	51.2
Johns Creek	5.2	R	56.4
Otter Creek	4.8	R	61.2
Peasley Creek	1.7	L	62.9
Wing Creek	4.7	R	67.6
Twentymile Creek	1.2	R	68.8
Reed Creek	5.9	L	74.7
Ten Mile Creek	1.4	R	76.1
Buckhorn Creek	2.8	R	78.9
Legget Creek	5.5	L	84.4
Newsome Creek	1.2	L	85.6
Dutch Oven Creek	7.7	L	93.3
Crooked River	3.0	R	96.3
Beginning of S.F.	6.9		103.2

Table 12. Summary of fish densities (per 100 m²) as determined by snorkeling the mainstem of the South Fork Clearwater, 2000.

			Steelhead trout					Cutthroat trout						
Km	Date	Section area (m²)	Total	Age 0	Age 1	Age 2	Age >2	Total	<305	>305	Chinook salmon	Mountain whitefish	Bull trout	Brook trout
0.6	8/4	1584.4	0.95	0.5	0.32	0.13	0	0.06	0.06	0	0	0.44	0	0
1.0	8/4	1471.7	0.07	0.07	0	0	0	0	0	0	0	0.41	0	0
2.5	8/4	1611.4	0.06	0.06	0.19	0	0	0	0	0	0	0.19	0	0
3.8	8/4	2599.6	0.04	0.04	0	0	0	0	0	0	0	0	0	0
3.8	8/4	1500.0	0	0	0	0	0	0	0	0	0	0	0	0
4.9	8/4	1994.2	0	0	0	0	0	0	0	0	0	0.05	0	0
5.4	8/4	1683.0	0.06	0.06	0	0	0	0	0	0	0	0	0	0
6.9	8/4	2288.0	0	0	0	0	0	0	0	0	0	0.04	0	0
7.5	8/4	2624.4	0	0	0	0	0	0	0	0	0	0.11	0	0
8.5	8/4	2293.6	0	0	0	0	0	0	0	0	0	0	0	0
8.5	8/9	2146.0	0	0	0	0	0	0	0	0	0	0.09	0	0
9.7	8/5	1481.6	0	0	0	0	0	0	0	0	0	0	0	0
10.5	8/5	1990.2	0	0	0	0	0	0	0	0	0	0.15	0	0
11.8	8/5	985.6	0.41	0	0	0.41	0	0	0	0	0	0.51	0	0
12.6	8/5	2768.9	0.08	0	0.04	0.04	0	0	0	0	0	0.22	0	0
13.4	8/5	1669.8	0.18	0	0	0.18	0	0	0	0	0	0	0	0
13.4	8/9	1578.0	0	0	0	0	0	0	0	0	0	0.19	0	0
14.1	8/5	2413.3	0	0	0	0	0	0	0	0	0.08	0	0	0
15	8/5	845.9	0.24	0	0.12	0.12	0	0	0	0	0	2.36	0	0
16.7	8/5	2219.5	0.05	0.05	0	0	0	0	0	0	0	0.05	0	0
17.7	8/5	1754.6	0.39	0.28	0.11	0	0	0	0	0	0	0.34	0	0
18.2	8/5	1343.0	1.64	0.22	0.45	0.97	0	0.07	0.07	0	0	0.45	0	0
18.2	8/9	1443.9	0.7	0.07	0.35	0.28	0	0.07	0.07	0	0.07	0.76	0	0
19.7	8/5	1256.6	1.76	0.16	0.72	0.8	0.08	0	0	0	0	1.99	0	0
20.6	8/5	2467.1	0.65	0.49	0.12	0.04	0	0	0	0	0	0.28	0	0
21.9	8/5	1887.6	0.89	0.21	0.26	0.37	0.05	0.05	0.05	0	0	1.27	0	0
22.1	7/26	1185.1	4.14	2.53	0.93	0.51	0.17	0.08	0.08	0	0.17	0.25	0	0
23	7/26	3159.0	0.25	0.16	0.09	0.03	0	0	0	0	0.09	2.31	0	0
23	8/9	2905.8	0.45	0.17	0.28	0	0	0	0	0	0	3.48	0	0
24.8	7/26	1576.0	3.5	1.21	1.46	0.51	0.32	0.06	0.06	0	0	0.57	0	0
25	7/26	1585.6	3.73	2.52	0.95	0.13	0.13	0.25	0.25	0	0	4.16	0	0
26.9	7/26	2960.0	5.53	4.76	0.54	0.2	0.03	0.03	0.03	0	0	0.34	0	0
27.6	7/26	3022.3	2.61	0.99	0.5	0.76	0.36	0.03	0.03	0	0.03	1.52	0	0
28.5	7/26	1022.0	5.52	1.17	1.59	2.55	0.21	0	0	0	0	2.65	0	0
28.5	8/8	700.8	1.42	0	0.57	0.71	0.14	0.14	0.14	0	0	1.14	0	0
29.8	7/25	712.1	2.25	0	0.56	1.69	0	0	0	0	0	0.7	0	0
30.9	7/25	1430.7	6.65	1.4	1.54	2.38	1.33	0	0	0	0	1.05	0	0
31.9	7/26	1233.6	8.34	3.48	3.4	1.46	0	0	0	0	0	0.4	0	0
32	7/25	991.4	13.92	11.7	1.11	1.01	0.1	0	0	0	0.20	2.32	0	0
33.7	7/25	1621.1	9.57	3.58	3.15	1.91	0.93	0.06	0.06	0	0.06	0.49	0	0
33.7	8/8	1996.4	8.77	3.66	3.46	1.45	0.2	0	0	0	0	0.4	0	0
34.5	7/25	1291.2	10.99	3.87	3.56	2.94	0.62	0	0	0	0	1.39	0	0

Table 12. Continued.

km	Date	Section area (m^2)	Steelhead trout					Cutthroat trout			Chinook Salmon (Age 0)	Mountain whitefish	Bull trout	Brook trout
			Total	Age 0	Age 1	Age 2	Age >2	Total	<305	>305				
35.4	7/25	1220.4	7.21	2.29	2.46	1.72	0.74	0.08	0.08	0	0	0.41	0	0
36.9	7/25	1784.9	6.55	3.75	1.57	0.5	0.73	0	0	0	0.06	1.96	0	0
37.5	7/25	1473.8	6.98	1.97	2.37	2.17	0.47	0.14	0.14	0	0	0.07	0	0
38.5	7/25	1142.4	13.91	4.81	5.16	3.41	0.53	0.44	0.44	0	0	1.14	0	0
38.5	8/8	1256.7	9.39	2.23	4.06	2.86	0.24	0	0	0	0	0.48	0	0
39.8	7/25	1104.2	10.57	2.89	5.24	2.17	0.27	0.36	0.36	0	0.09	0.72	0	0
40.3	7/25	1153.4	8.31	2.86	4.59	0.69	0.17	0.09	0.09	0	0	2.34	0	0
41.7	7/25	937.0	11.21	5.66	4.27	1.28	0	0.11	0.11	0	0.75	1.81	0.11	0
42.3	7/25	1153.6	9.63	5.81	2.34	1.39	0.09	0	0	0	0	0.09	0	0
43.9	7/25	3105.0	1.74	1	0.42	0.32	0	0	0	0	0	1.29	0	0
43.9	8/8	2060.0	1.7	1.41	0.24	0.05	0	0	0	0	0.05	0.78	0	0
44.0	7/24	2083.7	3.65	2.11	1.1	0.34	0.1	0	0	0	0.67	0.62	0	0
45.9	7/24	1014.2	6.7	1.18	3.45	1.97	0.1	0	0	0	0.49	0.39	0	0
46.2	7/24	1242.1	16.58	8.62	6.56	1.25	0.15	0.07	0.07	0	0.24	0.96	0	0
47.6	7/24	1738.7	5.88	2.36	2.88	0.58	0.06	0	0	0	0.17	1.84	0	0
48.7	7/24	2082.4	7.94	3.46	4.27	0.7	0.14	0.05	0.05	0	1.92	1.01	0	0
48.7	8/8	3022.2	5.36	2.58	2.05	0.66	0.07	0.07	0	0.07	0.63	2.88	0	0
49.8	7/12	1669.2	5.21	3.65	1.2	0.36	0	0.06	0.06	0	0.06	0.72	0	0
50.3	7/12	2443.6	3.84	2.41	0.82	0.53	0.08	0	0	0	0.74	0.08	0	0
51.1	7/12	1675.0	4.71	1.31	2.39	1.01	0	0	0	0	0	0.12	0	0
52.0	7/12	2343.6	4.44	2.17	1.11	1.07	0.09	0.09	0.09	0	0.04	0.6	0	0.04
53.0	7/12	1316.9	2.27	0.76	1.06	0.45	0	0	0	0	0.38	0.61	0	0
53.0	8/8	1182.6	4.82	1.44	2.2	0.93	0.25	0.16	0.08	0.08	0.17	2.54	0	0
54.3	7/11	2171.4	4.43	2.44	1.25	0.69	0.05	0	0	0	0.05	0.51	0	0
55.5	7/11	2072.0	1.07	0.68	0.39	0	0	0	0	0	4.49	0.1	0	0
56.4	7/11	1242.4	2.65	0.48	1.93	0.08	0.16	0	0	0	1.05	1.13	0.08	0
57.4	7/11	1142.4	11.38	5.25	4.46	1.58	0.09	0.09	0.09	0	1.23	0.79	0	0
58.2	7/11	2850.0	7.4	3.84	2.15	1.3	0.11	0.14	0.14	0	0.14	0.6	0	0.04
58.2	8/8	908.7	11.13	6.5	3.74	0.89	0	0.11	0.11	0	0.44	1.54	0	0
59.7	7/11	928.0	5.73	1.3	2.81	1.4	0.22	0.43	0.43	0	3.02	1.3	0	0
60.7	7/11	996.8	8.33	0.91	5.22	1.1	0.1	0.1	0.1	0	1.40	0.7	0	0
61.8	7/11	1601.5	4.62	0	3	1.5	0.12	0.06	0.06	0	0	1.5	0.06	0
62.9	7/11	2566.1	4.51	2.37	1.52	0.62	0	0.19	0.19	0	0.08	0.78	0	0
63.7	7/11	1368.4	5.53	0.36	3.57	1.53	0.07	0	0	0	0	0.8	0.07	0.07
63.7	8/6	774.9	5.95	0.39	1.94	3.36	0.26	0	0	0	0	8.39	0	0
64.1	7/10	3620.8	1.52	0.11	1.08	0.3	0.03	0	0	0	0.08	0.88	0.06	0
65.9	7/10	764.5	12.68	3.66	5.1	3.79	0.13	0	0	0	0.26	0.13	0.13	0
66.0	7/10	741.2	7.55	1.35	4.18	2.02	0	0.13	0.13	0	0.27	1.21	0	0
67.8	7/9	1435.9	5.71	1.25	3.69	0.77	0	0.35	0.35	0	1.67	0.49	0	0.07
68.6	6/29	700.0	8.43	0	7	1.43	0	0	0	0	1.00	0.29	0	0
68.6	8/6	540.5	15.4	3.15	10.02	2.23	0	0	0	0	0.37	1.11	0	0

Table 12. Continued.

km	Date	Section area (m^2)	Steelhead trout					Cutthroat trout			Chinook salmon (Age 0)	Mountain whitefish	Bull trout	Brook trout
			Total	Age 0	Age 1	Age 2	Age >2	Total	<305	>305				
69.7	6/29	786.5	8.38	0	6.1	2.03	0.25	0	0	0	0	0.38	0	0
70.3	6/29	1108.8	5.94	0	4.68	1.26	0	0	0	0	0.09	0.9	0	0
71.8	6/29	234.0	15.52	0	15.09	0.43	0	0	0	0	0	3.45	0	0
72.4	6/29	1500.0	3.21	0.07	2.2	0.87	0.07	0	0	0	0.20	1.07	0.07	0
73.7	6/29	1286.3	6.15	0	4.9	1.09	0.16	0	0	0	0.16	0.23	0.07	0
73.7	8/6	1020.0	9.38	0.68	7.14	1.17	0.39	0.1	0.1	0	0	4.79	0.1	0
74.4	6/29	2861.6	5.68	0.03	4.54	0.87	0.24	0	0	0	0.10	1.29	0.07	0
75.7	6/28	1065.6	6.56	0.09	4.69	1.5	0.28	0.09	0.09	0	0.09	0.75	0	0
76.9	6/28	2235.6	0.94	0.18	0.54	0.13	0.09	0	0	0	0.22	0.13	0	0
77.7	6/28	1452.7	6.25	0.14	5.29	0.82	0	0	0	0	0	1.17	0	0
78.3	6/28	1050.6	6.57	0.1	6.47	1.43	0.29	0.1	0.1	0	0	0.67	0.1	0
78.3	8/6	825.8	10.63	2.9	7.37	0.12	0.24	0.12	0.12	0	0.36	2.66	0	0
79.3	6/28	1314.5	6.26	0.08	4.88	1.22	0.08	0.08	0.08	0	0.08	0.61	0	0
80.5	6/28	1240.0	7.03	0	5.82	0.97	0.24	0	0	0	0.08	0.65	0	0
81.6	6/28	695.5	7.3	0	5.73	1.43	0.14	0	0	0	0	0	0	0
82.2	6/28	1724.3	1.97	0.29	1.62	0.06	0	0	0	0	0.17	0.41	0	0
83.9	6/28	1325.1	2.57	0	2.34	0.15	0.08	0.08	8	0	0	0.45	0	0
83.9	8/6	2369.3	1.57	0.13	1.4	0.04	0	0.04	0.04	0	0.08	2.36	0	0
84.5	6/28	3352.9	0.42	0	0.39	0.03	0	0	0	0	0	0.33	0	0
85.5	6/28	1056.0	1.6	0.09	1.42	0.09	0	0	0	0	0	1.52	0	0
86.6	6/27	2251.2	3.2	0.31	2.71	0.09	0.09	0	0	0	0.09	1.11	0.09	0
87.2	6/27	1089.9	7.07	1.47	5.23	0.37	0	0	0	0	0.09	0.64	0	0
88.7	6/27	1023.0	4.5	1.17	3.23	0.1	0	0	0	0	0.10	0.1	0.1	0
88.7	8/6	1205.1	1.58	0.25	1.33	0	0	0.17	0.17	0	0.08	3.07	0	0
89.2	6/27	2884.1	28.63	0.95	23.39	2.39	1.9	0.72	0.48	0.24	0.55	5.01	0	0
90.2	6/27	3650.7	4.2	0.47	3.18	0.55	0	0	0	0	0.85	0.74	0	0
91.1	6/27	2222.7	2.92	0.22	2.25	0.45	0	0	0	0	0.45	0.31	0	0
92	6/27	1729.8	4.67	0	3.69	0.75	0.23	0.58	0.58	0	0.17	0.81	0	0
93.9	6/27	1423.1	2.88	0.35	2.25	0.21	0.07	0	0	0	0.42	0.84	0	0
93.9	8/6	1174.2	0.26	0.26	0	0	0	0	0	0	0	2.64	0	0
94.3	6/27	1887.3	2.77	1.01	1.54	0.11	0.11	0	0	0	0	0.37	0	0
95.3	6/27	746.7	6.15	0.4	4.28	1.34	0.13	0.13	0.13	0	0	3.35	0	0
96.8	6/26	1772.4	2.54	0	2.2	0.34	0	0	0	0	0	1.41	0	0
		1330.0												
97	6/26	1573.2	4.51	0.08	3.38	0.75	0.3	0.23	0.15	0.08	0	1.58	0.15	0
98.7	6/26	598.1	2.71	0.06	2.48	0.06	0.13	0.13	0.13	0	0	0.09	0	0
98.7	8/6	2076.0	2.01	0.17	1.5	0.17	0.17	0	0	0	0	1.17	0	0.17
99	6/26	914.1	2.36	0.05	1.97	0.29	0.05	0.05	0.05	0	0	0.87	0.05	0.1
100.3	6/23	2611.8	3.84	0.67	2.95	0.11	0.11	0	0	0	0	0.67	0	0
101.6	6/23	1531.1	2.67	0.15	2.17	0.27	0.08	0.08	0.08	0	0	0.88	0.04	0
102.4	6/22	2429.3	2.35	0.26	1.89	0.2	0	0	0	0	0	0.33	0	0
103.2	6/22	1252.3	2.34	0.99	1.15	0.16	0.04	0.04	0.04	0	0.04	0.12	0.04	0
103.2	8/6	1108.8	4.32	2.64	1.2	0.48	0	0	0	0	0.96	3.11	0	0.16

Table 13. Summary of nongame fish densities (per 100 m^2) as determined by snorkeling the mainstem of the South Fork Clearwater River, 2000.

Stream (km)	Date	Section Area (m^2)	Sucker Spp.	Northern Pikeminnow	Sculpin Spp.	Dace Spp.	Redside shiner
0.6	8/4	1584.4	0.25	0.13	0.13	5.29	1.39
1.0	8/4	1471.7	0.27	0.54	0.07	2.45	86.70
2.5	8/4	1611.4	0.19	0.31	0.37	24.2	2.85
3.8	8/4	2599.6	0.04	0.08	0	1.27	36.60
3.8	8/4	1500.0	0.20	6.93	0.27	6.53	60.0
4.9	8/4	1994.2	0	0	0	2.76	5.27
5.4	8/4	1683.0	0	3.45	0	21.09	1.54
6.9	8/4	2288.0	0	0.66	0.09	22.73	12.28
7.5	8/4	2624.4	0	0	0.11	4.23	0.08
8.5	8/4	2293.6	0	0.17	0	0.65	3.14
8.5	8/9	2146.0	0	0	0.05	9.88	0
9.7	8/5	1481.6	0	0	0	3.99	0.20
10.5	8/5	1990.2	0.05	0	0.20	2.51	2.66
11.8	8/5	985.6	0.10	0.10	0	7.10	2.03
12.6	8/5	2768.9	0.04	0	0.04	0.61	2.86
13.4	8/5	1669.8	0.12	0.12	0.24	4.91	4.13
13.4	8/9	1578.0	0	0	0.51	4.12	8.17
14.1	8/5	2413.3	0.04	0	0.04	4.19	2.69
15	8/5	845.9	8.39	6.27	0.47	0	10.52
16.7	8/5	2219.5	0.05	0	0.05	2.57	0
17.7	8/5	1754.6	0	0.06	0	1.54	0
18.2	8/5	1343.0	0	0	0.22	14.52	22.78
18.2	8/9	1443.9	0.07	0	0	3.74	12.88
19.7	8/5	1256.6	0	0	0	1.35	7.97
20.6	8/5	2467.1	0.12	0	0.08	5.15	0.85
21.9	8/5	1887.6	0.05	0.05	0.16	1.38	12.08
22.1	7/26	1185.1	0.08	0	0.17	0.59	0
23	7/26	3159.0	0.51	0.09	0	0.03	0.13
23	8/9	2905.8	0.17	0.38	0.07	1.34	6.24
24.8	7/26	1576.0	3.93	1.27	0.13	1.78	1.97
25	7/26	1585.6	0.32	0	0.19	4.60	4.35
26.9	7/26	2960.0	0.37	0.07	0.34	2.84	0
27.6	7/26	3022.3	1.65	0.17	0.07	1.36	0
28.5	7/26	1022.0	1.49	0.74	0	2.97	6.05
28.5	8/8	700.8	0.14	0.14	0	0	2.85
29.8	7/25	712.1	0.56	0	0	0	0

Table 13. Continued.

Stream (km)	Date	Section Area (m^2)	Sucker Spp.	Northern Pikeminnow	Sculpin Spp.	Dace Spp.	Redside shiner
30.9	7/25	1430.7	0.77	1.40	0	2.73	0.07
31.9	7/26	1233.6	0	0	0	0.89	0
32.0	7/25	991.4	0.91	0.10	0	1.41	1.71
33.7	7/25	1621.1	2.47	0.06	0	0.19	0.06
33.7	8/8	1996.4	0.05	0	0.06	1.25	0.05
34.5	7/25	1291.2	0	0.15	0	0.23	0
35.4	7/25	1220.4	0.90	0.25	0	0	0
36.9	7/25	1784.9	0.67	0.28	0	0.22	0.06
37.5	7/25	1473.8	0.14	0	0	0	0
38.5	7/25	1142.4	0.88	0.26	0	0.18	0.26
38.5	8/8	1256.7	3.26	0.72	0.08	0.88	1.35
39.8	7/25	1104.2	0.18	0	0.09	0	0
40.3	7/25	1153.4	0	0	0.09	0	2.16
41.7	7/25	937.0	0	0	0	2.35	0
42.3	7/25	1153.6	0.17	0	0	0	0
43.9	7/25	3105.0	0.26	0.16	0	0	0
43.9	8/8	2060.0	0.05	0.10	0.15	0.78	0
44.0	7/24	2083.7	0.14	0	0.62	1.30	4.80+
45.9	7/24	1014.2	0	0	0	0	0
46.2	7/24	1242.1	0	0	0	0.81	0.07
47.6	7/24	1738.7	0.86	0.29	0	0.29	0
48.7	7/24	2082.4	0.43	0	0	1.34	1.73
48.7	8/8	3022.2	0.79	0.07	0.20	1.36	4.20
49.8	7/12	1669.2	0.42	0	0.06	3.71	0
50.3	7/12	2443.6	0.33	0	0.08	2.45	0
51.1	7/12	1675.0	0.36	0	0.06	0.06	0
52.0	7/12	2343.6	0.17	0.04	0.04	0	0
53.0	7/12	1316.9	0	0	0	0	0
53.0	8/8	1182.6	0	0	0	0.17	0
54.3	7/11	2171.4	0.37	0	0.05	0	0
55.5	7/11	2072.0	0.14	0	0	0	0
56.4	7/11	1242.4	0.08	0	0.24	0.16	0
57.4	7/11	1142.4	0.18	0	0.18	2.19	0
58.2	7/11	2850.0	0.04	0	0.11	0.11	0
58.2	8/8	908.7	0.22	0	0	0.55	0
59.7	7/11	928.0	0.43	0	0.11	0.11	0
60.7	7/11	996.8	0.30	0	0.10	0.10	0
61.8	7/11	1601.5	0	0	0	0	0

Table 13. Continued.

Stream (km)	Date	Section Area (m^2)	Sucker Spp.	Northern Pikeminnow	Sculpin Spp.	Dace Spp.	Redside shiner
62.9	7/11	2566.1	0.12	0	0	0.43	0
63.7	7/11	1368.4	0	0	0	0	0
63.7	8/6	774.9	0.13	0	0	0	0
64.1	7/10	3620.8	0	0	0	0.41	0
65.9	7/10	764.5	0.13	0	0	0	0
66.0	7/10	741.2	0	0	0	0	0
67.8	7/9	1435.9	0.07	0	0	0	0
68.6	6/29	700.0	0.14	0	0	0	0
68.6	8/6	540.5	0	0	0	0	0
69.7	6/29	786.5	0	0	0	0	0
70.3	6/29	1108.8	0.09	0	0	0.09	0
71.8	6/29	234.0	0	0	0	0	0
72.4	6/29	1500.0	0.33	0	0	0.07	0
73.7	6/29	1286.3	0.16	0	0	0	0
73.7	8/6	1020.0	6.65	0	0	0.49	0
74.4	6/29	2861.6	1.85	0	0	2.52	0
75.7	6/28	1065.6	1.22	0	0	4.79	0
76.9	6/28	2235.6	1.39	0	0.04	0	0
77.7	6/28	1452.7	0.21	0	0.07	0.41	0
78.3	6/28	1050.6	0.38	0	0	0.48	0
78.3	8/6	825.8	0.12	0	0	0.12	0
79.3	6/28	1314.5	1.22	0	0.15	3.81	0
80.5	6/28	1240.0	0	0	0.08	0	0
81.6	6/28	695.5	0.29	0	0	0	0
82.2	6/28	1724.3	0	0	0	4.98	0
83.9	6/28	1325.1	0.08	0	0	4.31	0
83.9	8/6	2369.3	0.68	0	0.04	26.51	0
84.5	6/28	3352.9	0.06	0	0.03	2.18	0
85.5	6/28	1056.0	1.99	0	0	0.66	0
86.6	6/27	2251.2	1.38	0	0	5.86	0
87.2	6/27	1089.9	2.48	0	0	24.31	0
88.7	6/27	1023.0	0.29	0	0	14.86	0
88.7	8/6	1205.1	0	0	0.08	1.41	0
89.2	6/27	2884.1	3.34	0	0.72	120.0+	0
90.2	6/27	3650.7	0.27	0	0.03	2.96	0
91.1	6/27	2222.7	0.31	0	0.13	2.61	0
92	6/27	1729.8	0.23	0	0	0.17	0

Table 13. Continued.

Stream (km)	Date	Section Area (m^2)	Sucker Spp.	Northern Pikeminnow	Sculpin Spp.	Dace Spp.	Redside shiner
93.9	6/27	1423.1	0.07	0	0	1.40	0
93.9	8/6	1174.2	0	0	0.09	0	0
94.3	6/27	1887.3	0	0	0	0.32	0
95.3	6/27	746.7	0	0	0	0	0
96.8	6/26	1772.4	0.06	0	0	1.81	0
97	6/26	1330.0	0.53	0	0.08	3.23	0
98.7	6/26	1573.2	1.27	0	0	15.47	0
98.7	8/6	598.1	0.67	0	0	8.03	0
99	6/26	2076.0	1.15	0	0.05	5.53	0
100.3	6/23	914.1	0.11	0	0.11	7.66	0
101.6	6/23	2611.8	0.27	0	0	3.09	0
102.4	6/22	1531.1	0.07	0	0	0.26	0.07
103.2	6/22	2429.3	2.10	0	0	9.22	0
103.2	8/6	1252.3	0	0	0	11.1	0

Table 14. Chinook spawning ground survey summary Clearwater River drainage, South Fork Clearwater River, 2000.

Drainage	Reach	Type	Description	Date	Method	Redds	Fish Live	Fish Dead
Red River	NC-1	T	Weir to Cole 66 Bridge	9/8	Aerial	72	65	23
	NC-2	NT	Otterson Cr to Ditch Cr.	9/8	Aerial	ND, included in Strata 2 count		
		NT	Ditch Cr. to weir	9/8	Aerial	ND, included in Strata 2 count		
		NT	Weir to Blanco Cr.	part of NC-1 and Strata III count				
		ISS&C	Strata 1 and Strata 2 (Weir to Shissler Cr)	9/8	Aerial	2	1	0
	NC-2b		Strata 2: Weir-Red River Campground	8/28	Ground	2	3	0
				9/10	Ground	7	15	1
				9/22	Ground	0	0	0
	NC-2a		Strata 1: Red River Campground-Shissler Creek	8/28	Ground	1	5	0
				9/11	Ground	1	0	0
				9/22	Ground	0	0	0
		ISS&C	Strata 3 (Little Moose Cr to weir)	9/8	Aerial	12	22	18
			IDFG personnel	8/27	Ground	13	61	2
				9/8-9	Ground	60	103	33
				9/23	Ground	0	0	34
		ISS&C	Strata 4 (Dawson Cr to Little Moose Cr)	9/8	Aerial	23	14	5
				8/27	Ground	4	26	0
				9/8	Ground	29	64	9
				9/23	Ground	0	0	4
		ISS&C	Strata 5 (Gold Point to Dawson Cr)	9/8	Aerial	37	29	0
				8/27	Ground	4	18	0
				9/7	Ground	33	66	3
				9/22	Ground	0	0	11

Table 14. Continued.

Drainage	Reach	Type	Description	Date	Method	Redds	Fish Live	Fish Dead
Red River	ISS&C		Strata 6 (Mouth to Gold Point)	9/8	Aerial	32	4	1
				8/26	Ground	6	74	1
				9/4-7	Ground	70	110	3
				9/21	Ground	5	0	40
SF Red River	NC-3	NT	Mouth to Trapper Creek		Ground	Not done		
			Red River Ground Count Total			235	545	141
			Red River Aerial Count Total			106	70	24
American River	NC-4	T	Lick Creek to Kirks Fork	9/8	Aerial	26	7	1
		ISS&C	Strata 1 (Corrals to Limber Luke)	9/8	Aerial	0	0	0
				8/31-9/1	Ground	0	0	0
				9/13	Ground	1	0	0
				9/27	Ground	1	0	0
		ISS&C	Strata 2 (Box Sing Cr to Corrals)	9/8	Aerial	20	8	4
				8/29	Ground	3	44	0
				9/15-17	Ground	45	23	25
				9/27	Ground	2	1	17
		ISS&C	Strata 3 (Mouth to Box Sing Creek)	9/8	Aerial	44	20	0
				8/29	Ground	6	47	0
				9/12-16	Ground	70	60[2]	28
				9/27	Ground	2	1	61
		American River Ground Count Total				130	176	131
		American River Aerial Count Total				64	28	4

Table 14. Continued.

Drainage	Reach	Type	Description	Date	Method	Redds	Fish Live	Fish Dead
Crooked River	NC-5	C	Relief Cr. to upper end of airstrip	Not done				
	NC-6	T	Mouth to forks above Old Orogrande	9/8	Aerial	44	34	0
			Weir to forks	9/8	Aerial	37	29	0
			Mouth to weir	9/8	Aerial	7	5	0
				8/24	Ground	0	1	0
				9/2	Ground	3	0	0
				9/17	Ground	3	0	6
			Strata 3-lower (weir to bottom of meanders)	8/23	Ground	0	2	0
				9/3	Ground	6	---[2]	0
				9/18	Ground	5	0	14
			Strata 4 (the meanders)	8/23	Ground	0	1	0
				9/3	Ground	20	31	0
				9/18	Ground	15	0	0
			Strata 3-upper (top of meanders to narrows)	8/23	Ground	0	1	0
				9/3	Ground	4	3	0
				9/18	Ground	4	0	14
			Strata Canyon (the narrows)	8/24	Ground	0	2	0
				9/3	Ground	5	9	0
				9/18	Ground	5	2	5
			Strata 2 (top of narrows to bridge)	8/24-25	Ground	2	13	0
				9/3	Ground	3	5	2
				9/18	Ground	0	0	0
			Strata 1 (bridge to forks)	8/25	Ground	6	20	0
				9/4	Ground	12	9	7
				9/20	Ground	0	0	5
			Crooked River Ground Count Total			93	99	53
			Crooked River Aerial Count Total			44	34	0

Table 14. Continued.

Drainage	Reach	Type	Description	Date	Method	Redds	Fish Live	Fish Dead
Newsome Cr.	NC-7	C	Nugget Cr. to Beaver Cr.		Not done			
	NC-8	T	Mouth to Radcliff Cr.	9/8	Aerial	12[3]	4	0
		C	Radcliff Cr to headwaters	9/8	Aerial	0	0	0
SF Clearwater	new	ISS&C	Mouth to Stites	9/8	Aerial	0	0	0
River	1995	ISS&C	Stites to Harpster	9/8	Aerial	0	0	0
		ISS&C	Harpster to Mt Idaho	9/8	Aerial	2	0	0
		ISS&C	Mt Idaho to Johns Cr	9/8	Aerial	2	2	0
		ISS&C	Johns Cr to Tenmile Cr	9/8	Aerial	1	0	0
		ISS&C	Tenmile Cr to Newsome Cr	9/8	Aerial	7	0	0
		ISS&C	Newsome Cr to Crooked R	9/8	Aerial	21	0	0
		ISS&C	Crooked R. to Red River	9/8	Aerial	52	17	1
Tenmile Creek	new	ISS&C	Mouth to Morgan Cr.	9/8	Aerial	0	0	0
	1995	ISS&C	Morgan Cr to headwaters	9/8	Aerial	0	0	0
Johns Creek	new	ISS&C	Mouth to Frank Brown Cr	9/8	Aerial	0	0	0
	1995	ISS&C	Frank Brown to headwaters	9/8	Aerial	0	0	0
			South Fork Drainage Ground Count Total			458	820	325
			South Fork Drainage Aerial Count Total			311	155	29

[1] Poor visibility
[2] Some redds "occupied"; no count given
[3] No redds observed above Nez Perce Tribal Hatchery Water Intake Weir
Visibility poor to marginal for the entire drainage during aerial surveys. Surveys done in a Hughes 500C, which has less viewing visibility as the Hiller, used in previous years. Flights one week later than usual. NOTE: Ground counts on subsequent dates are new redds only.

HATCHERY TROUT SAMPLING AND DIET ANALYSIS

The Idaho Department of Fish and Game annually stocks approximately 50,000 resident rainbow trout in the lower 100 kilometers of the Salmon River and the lower 70 kilometers of the Clearwater River in Idaho. This stocking is funded by the Lower Snake River Compensation Plan (LSRCP) as part of LSRCP's resident fisheries mitigation program. These fingerlings are approximately 100 to 150 millimeters long when stocked in October. In 2000, the lower Salmon River received approximately 25,115 domestic Kamloops rainbow from the State of Idaho hatchery system and approximately 25,245 Spokane strain rainbow from the Lower Snake River Compensation Plan hatchery at Lyon's Ferry, Washington. The lower Clearwater received approximately 26,245 domestic Kamloops and 25,245 Spokane strain rainbows. Domestic Kamloops averaged 32 fish per pound and were marked with a left ventral fin clip and Spokane rainbow averaged 18 fish per pound and were marked with a right ventral fin clip prior to release. Because of their small size, fish released in 2000 are not likely to prey on other fishes and will not be sampled for diet analysis until 2001.

Methods

Personnel from the U.S. Fish and Wildlife Service (USFWS) Dworshak Fisheries Assistance Office (DFAO) collected fish and food habit information for us on the Clearwater River in 2000. They collected this data in conjunction with a hatchery steelhead residualization study. Sampling was conducted by electrofishing with pulsed direct current from a portable generator and a Coffelt VVP-2E pulsator, with booms and electrodes mounted on a 5.5-meter aluminum whitewater jet boat.

Sampling on the lower Salmon River was conducted with hook and line gear. Sampling effort in 2000 was reduced due to extensive fires along the river during our scheduled sampling period. Past experience has shown hook and line sampling to be the more effective collection method in the lower Salmon River than electrofishing. From 1991 to 1995, 81.5 percent (177/217) of the trout we collected in the lower Salmon River were captured using hook and line gear.

We examined all trout collected for fin clips and measured for length. We classified trout with general fin deformity and/or erosion but no clips as unspecified hatchery trout and trout with no fin deformities or clips as wild/natural. All wild/natural trout were released unharmed. All hatchery trout collected in the Salmon River were sacrificed and their stomachs dissected for diet analysis. Due to the labor-intensive nature of the USFWS smolt study, only target fish (domestic Kamloops, Colorado, and Spokane strain rainbow) were sacrificed for diet analysis on the Clearwater River.

Results

Clearwater River

The USFWS sampled sections with electrofishing gear weekly from April 10 to August 29, 2000 within the lower 70 kilometers of the Clearwater River. In approximately 1,956 minutes of electrode on time, they collected 1,873 hatchery steelhead smolts, and 8 domestic Kamloops rainbow (Table 15).

They dissected the stomachs of all domestic Kamloops rainbow for diet analysis. Diet consisted primarily of aquatic and terrestrial insects, snails and green algae. No fish or fish parts were found.

Table 15. Length frequency of hatchery rainbow trout collected by electrofishing and sacrificed for diet analysis in the lower Clearwater River, 2000.

Length (mm)	Hatchery steelhead (ad clip)	Unspecified hatchery rainbow	Colorado/ Spokane strain (RV clip)	Kamloop Rainbow (LV clip)	Wild rainbow	Total
140-159						0
160-179						0
180-199						0
200-119				2		2
220-239						0
240-259						0
260-279				2		2
280-299				4		4
300-319						0
320-339						0
340-359						0
360-379						0
380-399						0
400-419						0
420-439						0
440-459						0
460-479						0
TOTAL	0	0	0	8	0	8

Salmon River

We sampled the lower 80 kilometers of the Salmon River with hook and line gear during September 1- 2, 2000. In approximately 14 hours of effort with hook and line gear, we captured 8 wild rainbow trout, 1 residualized hatchery steelhead smolt, and 14 domestic Kamloops rainbow trout. Three year classes of hatchery rainbow were represented in the sample (Table 16).

We dissected the stomachs of all 15 hatchery origin trout collected from the Salmon River and examined the content. Diet generally consisted of aquatic and terrestrial insects, aquatic snails, and green algae. No fish or fish parts were found.

Table 16. Length frequency of rainbow trout collected by hook and line in the lower 80 kilometers of the Salmon River, 2000.

length (mm)	Hatchery steelhead (ad clip)	Unspecified hatchery rainbow	Colorado/ Spokane strain (RV clip)	Kamloop rainbow (LV clip)	Wild rainbow	Total
140-159					1	1
160-179					1	1
180-199					2	2
200-119					1	1
220-239						0
240-259					1	1
260-279			2		1	3
280-299			6			6
300-319			5		1	6
320-339			1			1
340-359						0
360-379						0
380-399						0
400-419						0
420-439						0
440-459						0
460-479	1					1
TOTAL	1	0	14	0	8	23

JOB PERFORMANCE REPORT

State of: Idaho

Program: Fisheries Management F-71-R-26

Project II: Technical Guidance

Subproject II-B: Clearwater Region

Contract Period: July 1, 2000 to June 30, 2001

Period Covered: January 1, 2000 to December 31, 2000

ABSTRACT

Clearwater Region fishery management personnel provided technical review and advice to private individuals, organizations, state and federal agencies, Indian tribes, and public schools on various projects and activities that affect the fishery resources in north central Idaho. Technical guidance also included numerous angler informational meetings, presentations, and letters.

JOB PERFORMANCE REPORT

State of: Idaho Program: Fisheries Management F-71-R-26

Project III: Habitat Management Subproject III-B: Clearwater Region

Contract Period: July 1, 2000 to June 30, 2001

Period Covered: January 1, 2000 to December 31, 2000

ABSTRACT

We continued to work with local sportsmen to correct late summer algae problems at Elk Creek Reservoir.

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